

Dementia and Alzheimer's Disease 2019: A treatable Dementia: Normal pressure Hydrocephalus- Veronica Redaelli, Neurological Institute Carlo Besta, Italy

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Abstract

In the near future the population of the over 65 is expected to increase arising the big problem of social care of the elderly. As consequence, the incidence of iNPH will grow because of the augmented life expectancy increasing the risk of severe cognitive impairment. Idiopathic normal pressure (iNPH) is a neurological disorder occurring in older adults and involving gait and balance disturbances, control of micturition, and cognitive impairment (the so-called "classic triad" of symptoms of the disease) associated with enlargement of the cerebral ventricles. Gait and balance disturbances are the most common early presenting findings and may occur alone or together, with cognitive and urinary symptoms appearing later. Diagnosis is often challenging due to its varied presentation and overlaps with other disorders common in the elderly (e.g. dementia or parkinsonism). Evidencebased consensus guidelines for diagnosis and treatment of iNPH were created to assist in clinical management, although the pathophysiological basis of the disease is still not clear. The diagnosis of iNPH presently requires at least the clinical observation of one or more of its characteristic symptoms in combination with brain imaging evidence of a non-obstructive ventricular enlargement disproportionate to cerebral atrophy; adjunctive invasive tests (e.g. tap test, determination of outflow resistance, prolonged external drainage) to confirm diagnosis are suggested. Correct diagnosis is very important for good prognosis after surgical shunting. Patients can present more than one disease: neurodegenerative, vascular disease and iNPH often contribute to the clinical presentation of old patients. Understand if treatment of iNPH can take to a better quality of life of the patients is the first aim of the neurologist. Surgical shunting of cerebrospinal fluid (CSF) is recommended for iNPH patients with a favourable riskto- benefit ratio. Evidence has been collected about the presence of cerebrospinal fluid (CSF) biomarkers typically found in other neurodegenerative processes (e.g. abamyloid).

Veronica Redaelli is a neurologist and a researcher at Carlo Besta Neurological Institute in Milan. Her work is centered around patients affected by neurodegenerative diseases, in particular dementias as Alzheimer's disease (AD) prion diseases, tauopathies, parkinsonisms and patients affected by iNPH. She studies neurodegenerative diseases using a variety of approaches including genetic studies, classical neuropathology and immunohistochemistry, biochemistry, cellular and molecular biology and was aimed to define clinico-pathological and phenotype-genotype correlations in neurodegenerative diseases and to elucidate the pathogenetic mechanisms of neuronal degeneration in the diseases referred to as cerebral proteinosis, that are characterised by the accumulation in the nervous tissue of proteins or protein fragments (often amyloidogenic) as A β , prion protein and tau protein.

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